PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Poor physical function, pain, and limited exercise: Risk factors for premature mortality in the range of hypertension and smoking, identified on a simple patient self-report questionnaire for usual care
AUTHORS	Sokka, Tuulikki; Pincus, Theodore

VERSION 1 - REVIEW

REVIEWER	***Deborah Cohen*** Oregon Health & Science University I have no competing interests that shape how I reviewed this manuscript.
REVIEW RETURNED	23-Feb-2011

THE STUDY	The question the authors are attempting to answer in this research is unclear. Are they examining the relationships between the target behaviors and mortality? Are they assessing the utility of the questionnaire? This is an important issue because answering these questions does not, in my opinion, provide new information to the field. As such, it is not clear what the contribution of the manuscript is. In the Discussion, the authors suggest that this manuscript supports the ease of using the questionnaire in practice. However, this was not the focus of the study. Had it been, then the study would have been designed to examine the actual use of this tool in practice, rather than mailing the survey to Finnish patients. I cannot comment on the methods as I am not a statistician. However, I did wonder about the age of the data - 2000 and 2005. The abstract does not clearly reflect the study's purpose of the methods used.
RESULTS & CONCLUSIONS	As stated above, it is not clear what the research question is, so assessing if the results support the question is difficult. The interpretation - that this questionnaire is easy to use in practice - seems to be support by prior research, but not this study.

REVIEWER	***Douglas Fernald*** Senior Instructor University of Colorado School of Medicine United States I have no competing interests to report.
REVIEW RETURNED	04-Mar-2011

THE STUDY	This is a general population survey, but a table showing the

	differences between the completers and non-completeres would be important for interpreting the conclusions. There should be some description of how the sample size was determined and if it is adequate for the analysis presented. The sample sizes appear small in the analytical sample. I have some concerns about the use of what appears to be an English-language instrument in a Finnish population without any information about the validation in this new population and language. Please provide some information about translation and validation in the study population. The instrument asked about some important general health status indicators (4. “Considering all the ways…how you are doing.”; 7. “How do you feel today compared to one week ago”; 10. Many dichotomous items). Seeing how some or all of these related to mortality would be helpful; or, please state why only a few of the questionnaire items were selected for analysis. Please include Ns in the tables, where possible.
RESULTS & CONCLUSIONS	Part of the conclusions in the discussion follow appropriately from the data and analysis. However, one of the primary conclusions extends beyond what the study design, analysis, and results report. The authors state that “the new information here is that these medical history data can be collected easily in a 1-page…self-report format, which is easily completed by patients waiting to see a health professional.” The data presented are from a mailed survey. The analysis examines mortality risk. While I’d like to believe that these can easily be completed during a health care visit, it was not the objective of the study to actually assess whether this questionnaire can be easily completed by patients in waiting rooms. Further, there is considerable literature from the primary care realm that suggests this is not true, at least in routine practice. The authors make a much more compelling argument for including pain and physical function as additional assessments in routine medical histories in it's discussion on pages 14 and 15. If the authors would consider limiting the reach of their conclusions, the results and discussion would be clearer and more persuasive. The specific areas of concern are: p 13, lines 15-30; p 16, lines 29-44; abstract, p2, lines 54-57.

VERSION 1 – AUTHOR RESPONSE

Thank you very much for the insightful reviews. The initial submission did not articulate the experience of the authors with the MDHAQ in actual clinical practice. A version of the MDHAQ has been completed by every patient at every visit in actual clinical care for 30 years for Dr. Pincus and 20 years for Dr. Sokka. The questionnaire is part of the infrastructure of care: the patient is not seen if the questionnaire is not completed, so 100% completion is taken for granted.

As the Reviewers point out, many clinical sites regard any questionnaire as a burden, even if it saves time for both patients and doctors, as does the MDHAQ. That may be explained by several variables, including resistance to new approaches, and the fact that many questionnaires in research and clinical settings are lengthy and cumbersome and do not lend themselves to usual care, including the questionnaires used in many reports concerning the prognostic significance of medical history variables for mortality.

The patient self-report items on the MDHAQ have been shown to be significant in prognosis of long-term mortality of rheumatoid arthritis (RA), at considerably higher levels of significance than any imaging or laboratory test. Therefore, if the variables collected in this simple format are prognostic of mortality in the general population, a simple tool would be available that could be used in any clinical setting by any health professional to ascertain quantitative data concerning physical function, pain, and exercise status, which are prognostic of 5-year mortality in the range of smoking and hypertension (and likely cholesterol, although data are not available in the present study).

The authors believe strongly that the patient self-report information should be available to every health professional concerning every patient, and that the tool presented can facilitate that goal. However, evidence that the tool provides significant prognostic data is needed to support proposed advocacy. It is unlikely that this report alone will change the situation, but it might provide support for advocacy and further research concerning changes in clinical care practices..

The authors have made several changes in accord with the above, as follows:

REVIEWER 1 (Dr. Cohen)

The primary purpose of the manuscript is to document that the responses to queries in the simple format of the questionnaire are sufficient to document significant correlation of baseline variables and subsequent 5-year mortality. The Reviewer is entirely correct in suggesting that both the relationship between the target variables and mortality, and the utility of the questionnaire, have been established. What has not been established is that the simple MDHAQ format provides data which are prognostic of significant mortality risk not only in people with rheumatoid arthritis, but also in the general population.

The reason that is important is that these risk factors are not assessed by most clinicians in usual clinical settings, and therefore are not addressed, while risk factors such as cholesterol – which has far less prognostic significance based on literature data for mortality over 5 years – account for some of the best-selling pharmaceutical agents in the world.

The authors have attempted to make clear that the data in this manuscript do not “support the ease of using the questionnaire in practice,” but do cite extensive experience documented elsewhere to support this point.

The authors also have attempted to clarify the Abstract.

REVIEWER 2 (Dr. Fernald)

A prior manuscript [Kauppi M, Sokka T, Hannonen P. Survey nonresponse is associated with increased mortality in patients with rheumatoid arthritis and in a community population. J Rheumatol 2005;32:807-10] indicated that non-completers actually had higher mortality rates than completers, which is now noted in the Methods (page 8). This reference is now included (new Reference #24). This observation suggests that the Conclusions likely understate the risk factors, but it is not appropriate to speculate on this matter in this manuscript.

Perhaps the sample size appears small, but the authors may suggest that highly significant observations in a small sample may indicate robust results.

The questionnaire was translated into Finnish, and has been widely used in many studies in Finland for more than 20 years.

The Reviewer is correct that global health also is prognostic for mortality, although not at as high a level of significance in this cohort as physical function. The length of the manuscript did not appear to warrant presentation of further data.

This Reviewer also appropriately criticizes that no data are presented in this study to support the conclusion that the MDHAQ is easily completed by patients waiting to see a health professional. That has been extensively established, and, as noted, somewhat "taken for granted," by the authors, but now addressed more explicitly and in references. The ease of completion and 100% completion rate may not warrant an independent scholarly report – but perhaps such a report is needed, although not in this manuscript. The ease of completion may be implicit in a 76% return rate in the general population (albeit in Finland), although the mailed version was longer than the version used in clinical settings.

The authors are aware of "literature from primary care settings" that suggests that questionnaires are not easily completed in waiting rooms. However, their own experience over 20 and 30 years is that "questionnaires are easily completed in waiting rooms." The authors suggest that this is largely a function of the interest of the doctor – if the doctor regards the questionnaire data as required for clinical decisions, as is the case for the authors, the completion rate is 100%. A fuller discussion of this matter seems beyond the scope of this manuscript, but could be added if the Reviewers and Editors feel that is appropriate. The authors have attempted to limit the reach of the conclusions that the format of queries concerning physical function, pain, and exercise frequency are prognostic of mortality in the general population.

The MDHAQ can be collected by any health professional in any clinical setting, with no incremental investment of professional time. This practice could raise awareness of risk factors for mortality in the range of smoking or hypertension (and likely hyperlipidemia, based on observations in the literature) as routine in clinical care. Awareness of these risk factors could improve public health and long-term survival in the population, at far lower cost than pharmacologic interventions for cholesterol, hyperlipidemia, osteoporosis, etc. That would appear a message that might be brought to the attention of the general medical community – a reason to attempt to report this information in journals beyond rheumatology, in which these variables are more recognized (although, unfortunately, collected only by a minority of clinical caregivers).

The authors hope that these changes may render the manuscript acceptable for publication. Thank you for the excellent suggestions and kind consideration.

VERSION 2 - REVIEW

REVIEWER	***Douglas Fernald***
REVIEW RETURNED	18-Apr-2011

GENERAL COMMENTS	The revisions are sufficiently responsive to my earlier concerns. Thank you for the opportunity to review this manuscript. An interesting set of results.